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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,582	01/27/2004	Thomas L. Toth	GEMS8081.192	1702

7590 07/13/2005

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EXAMINER	
KAO, CHIH CHENG G	

ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,582	TOTH ET AL.	
	Examiner	Art Unit	
	Chih-Cheng Glen Kao	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 January 2004* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/17/04, 2/17/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *IDS: 1/17/05*.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

This is with regards to US Ser. No. 10/605,789; as recited on page 15, line 23 of the specification.

Drawings

2. The drawings are objected to because the contrast in Figures 12, 14, and 15 make them difficult to see.

The drawings are also objected to because of the following: (equation "E=R+H-C" not corresponding to fig. 18) and (equation "E=C-R-L" not corresponding to fig. 19). The equation "E=R+H-C" is equivalent to E+C=R+H. However, as seen in Figure 18, E+C does not equal R+H. Likewise, the equation "E=C-R-L" is equivalent to E+R+L=C. However, as seen in Figure 19, E+R+L does not equal C.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to because of the following informalities, which appear to be minor draft errors including drawing inconsistencies.

In the following format (location of objection; suggestion for correction), the following corrections may obviate their respective objections: (page 14, line 27, "stator 170"; replacing "170" with - -180- -) and (page 21, line 10, "selected 226"; replacing "226" with - -326- -).

Appropriate correction is required.

Claim Objections

4. Claims 16, 23, and 30 are objected to because of the following informalities, which appear to be minor draft errors including grammatical and lack of antecedent basis problems.

In the following format (location of objection; suggestion for correction), the following corrections may obviate their respective objections: (claim 16, line 3, "processor, cause the"; replacing "cause" with - -causes- -), (claim 23, line 1, "claim 16 the at"; inserting - -wherein- - after "claim 16"), and (claim 30, line 2, "the configuration"; replacing "the" with - -a- -).

For purposes of examination, the claims have been treated as such. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 5-9, 12, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore (US Patent 4181858).

6. Regarding claim 1, Moore discloses a method of diagnostic imaging (title) comprising the steps of determining a position (fig. 2a) of a subject (fig. 2a, #3) in a scanning bay (fig. 1a, #2) relative to a reference position (figs. 1a and 2a, positions to the far left or right of #31), automatically adjusting an attenuation characteristic (fig. 2a, by adjusting with #30) of an

attenuation filter (fig. 2a, #26) based on the determined position of the subject (col. 6, lines 27-39), and imaging the subject (col. 6, lines 44-45).

7. Regarding claim 5, Moore further discloses acquiring data (fig. 2a, #33) from at least one scout scan (fig. 2a) to determine the position of the subject (fig. 2a, #3) in the scanning bay.

8. Regarding claim 6, Moore further discloses determining at least one of a size, a shape, and a centering of the subject (fig. 2a, #3) from the at least one scout scan (fig. 2a).

9. Regarding claim 7, Moore further discloses acquiring a flux trend (fig. 2a, flux trend from #33) of the scout scan (fig. 2a) and wherein the step of adjusting an attenuation characteristic of an attenuation filter (fig. 2a, #26) includes adjusting a filter position according to the flux trend (col. 6, lines 27-39).

10. Regarding claim 8, Moore further discloses wherein the step of adjusting an attenuation characteristic of an attenuation filter (fig. 2a, #26) includes adjusting a position of the attenuation filter according to a flux rate (figs. 4a-5, #33) of a central region of the subject (figs. 4a-5).

11. Regarding claim 9, Moore further discloses wherein the step of adjusting an attenuation characteristic of an attenuation filter (fig. 1a, #26) includes configuring an imaging filter (fig. 1a, #26) to provide an optimal dose profile of high frequency electromagnetic energy (fig. 1a, #15) to the subject (fig. 1a, #3).

12. Regarding claim 12, Moore further discloses determining a diameter (fig. 2a, #33) of the subject (fig. 2a, #3) and an optimum bowtie filter opening (fig. 2a, #26) for the diameter of the subject (fig. 2a, #3).

13. Regarding claim 15, Moore further discloses determining a position (fig. 2a, #33) of the subject in three dimensions (fig. 2a, #3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Toth (US Patent 5457724).

15. Regarding claim 2, Moore discloses a method as recited above.

However, Moore does not disclose determining a size and an elevation of a subject within a scanning bay.

Toth teaches determining a size and an elevation (fig. 4) of a subject (fig. 4, #15) within a scanning bay (fig. 1, #11).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Moore with the determining of Toth, since one would be motivated to make such a modification to make a more optimal image (col. 2, lines 1-2) as implied from Toth.

16. Regarding claim 3, Moore further discloses adjusting the attenuation characteristic of the attenuation filter according to the size and the elevation of the subject (fig. 2a).

17. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Katsumata et al. (US Patent 4558458).

Moore discloses a method as recited above.

However, Moore does not disclose automatically adjusting elevation of a subject within a scanning bay to optimize radiation exposure to the subject.

Katsumata et al. teaches automatically adjusting elevation of a subject within a scanning bay to optimize radiation exposure to the subject (col. 7, line 65, to col. 8, line 7).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Moore with the automatic adjusting of Katsumata et al., since one would be motivated to make such a modification for obtaining a tomogram of higher precision (col. 8, lines 4-7) as shown by Katsumata et al.

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Hsieh (US Patent 5696807).

Moore discloses a method as recited above.

However, Moore does not disclose modulating a high frequency electromagnetic energy projection source at least according to a position of a subject in a scanning bay.

Hsieh teaches modulating a high frequency electromagnetic energy projection source (fig. 3, #56) at least according to a position (fig. 3, #52) of a subject (fig. 1, #22) in a scanning bay (fig. 1, #48).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Moore with the modulating of Hsieh, since one would be motivated to make such a modification for generating high quality images while reducing patient dose (col. 2, lines 57-58) as implied form Hsieh.

19. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Lienard et al. (US Patent Application Publication 2003/0007603).

Moore discloses a method as recited above. Moore further discloses performing at least one orthogonal scout (fig. 2a).

However, Moore does not disclose performing centroid calculations to determine a center of a subject.

Lienard et al. teaches performing centroid calculations to determine a center of a subject (paragraph 17).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Moore with the calculations of Lienard et al.,

since one would be motivated to make such a modification to better calibrate the images (paragraph 17) as shown by Lienard et al.

20. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Saunders (US Patent 4896343).

Moore discloses a method as recited above. Moore further discloses determining the position of the subject (fig. 2a, #3) in the scanning bay according to feedback from at least a light sensor (fig. 2a, #33).

However, Moore does not disclose determining a contour according to feedback from at a laser sensor and determining an area of the subject from the contour of the subject.

Saunders teaches determining a contour (col. 2, lines 65-69) according to feedback from at a laser sensor (col. 2, lines 9-12) and determining an area of the subject from the contour of the subject (col. 2, lines 16-20).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Moore with the determining of Saunders, since one would be motivated to make such a modification to more precisely determine the radiation dose to be delivered to a target area (col. 1, lines 53-57) as implied from Saunders.

21. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toth in view of Horiuchi (US Patent Application Publication 2002/0037067).

22. Regarding claim 16, Toth discloses steps of receiving feedback (fig. 3, #125) regarding mis-centering (fig. 3, #121) of a subject (fig. 4, #15) to be scanned, determining a value of mis-centering of the subject to be scanned (fig. 3, #121), adjusting at least one of an attenuation filter configuration and a subject position based on the value of mis-centering (col. 4, lines 47-60), and acquiring radiographic diagnostic data from the subject (fig. 3, #127).

However, Toth does not disclose a computer readable storage medium having stored thereon a computer program representing a set of instructions which, when executed by at least one processor, causes the processor to perform steps.

Horiuchi teaches a computer readable storage medium having stored thereon a computer program representing a set of instructions, which when executed by at least one processor, causes the processor to perform steps (paragraph 104).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the steps of Toth with a computer readable storage medium having a program for a processor as taught by Horiuchi, since broadly providing automatic means to replace manual activity, which has accomplished the same result, involves only routine skill in the art. One having ordinary skill in the art would be motivated to make such a modification for faster processing and more user control.

23. Regarding claim 22, Toth further discloses adjusting the position of the subject by adjusting an elevation of the subject (col. 4, lines 55-60).

24. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Moore and Sembritzki (US Patent Application Publication 2003/0058994).

Toth as modified above suggests a device as recited above.

However, Toth does not disclose repeatedly receiving position information about an attenuation filter during acquisition of radiographic diagnostic data from a subject.

Moore teaches receiving position information (fig. 2a, #33) about an attenuation filter for positioning a filter (fig. 2a, #26). Sembritzki teaches repeatedly positioning a filter during acquisition of radiation diagnostic data from a subject (paragraph 14, lines 8-10).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the position information of Moore, since one would be motivated to make such a modification to better compensate for variations in the path length of examining radiation through the body of a patient (col. 1, lines 5-9) as implied from Moore.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the repeated positioning of Sembritzki, since one would be motivated to make such a modification for reducing dose while having high image quality (paragraph 10) as implied from Sembritzki.

25. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Hsieh.

Toth as modified above suggests a device as recited above.

However, Toth does not disclose determining a desired tube current modulation in a first, second, and third direction with respect to a desired image noise, and dynamically adjusting a tube current based on the desired tube current modulation.

Hsieh teaches determining a desired tube current modulation in a first, second, and third direction with respect to a desired image noise (fig. 3, #52), and dynamically adjusting a tube current based on the desired tube current modulation (fig. 3, #56).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the modulating of Hsieh, since one would be motivated to make such a modification for generating high quality images while reducing patient dose (col. 2, lines 57-58) as implied form Hsieh.

26. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Zhou et al. (US Patent Application Publication 2002/0094064) and Grass et al. (US Patent 4578806).

Toth as modified above suggests a device as recited above. Toth further discloses determining a centering error from a distance of a center of the subject from an isocenter (col. 4, lines 30-36).

However, Toth does not disclose determining a center of mass of a subject and determining from an isocenter of a radiographic energy fan beam.

Zhou et al. teaches positioning relative to a center of mass (paragraph 68). Grass et al. teaches determining from an isocenter of a radiographic energy fan beam (col. 1, lines 51-63).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the positioning relative to a center of mass of Zhou et al., since one would be motivated to make such a modification to more easily ensure that the object is within the imaging zone (paragraph 68) as implied from Zhou et al.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the determination from an isocenter of a beam of Grass et al., since one would be motivated to make such a modification to obtain a better image (col. 1, lines 51-63) as implied from Grass et al.

27. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toth, Horiuchi, Zhou et al., and Grass et al. as applied to claim 19 above, and further in view of Kendrick et al. (US Patent Application Publication 2003/0206614).

Toth as modified above suggests a device as recited above. Toth further discloses determining a projection area (fig. 4).

However, Toth does not specifically disclose determining an adjusted projection area from a position of the center after repositioning.

Kendrick et al. teaches adjusting, displaying, and repositioning (fig. 5, #535, 540, and 545).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the adjusting,

displaying, and repositioning of Kendrick et al., since one would be motivated to make such a modification to make alignment more accurate (fig. 5) as implied from Kendrick et al.

It also would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the determining after repositioning, since merely repeating steps of an invention involves only routine skill in the art. One would be motivated to make such a modification to double-check the positioning for accuracy.

28. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Moore.

Toth as modified above suggests a device as recited above.

However, Toth does not disclose determining an optimum opening of an attenuation filter to optimize acquisition of radiographic diagnostic data from a subject while reducing dosage of electromagnetic energy projected toward the subject.

Moore teaches determining an optimum bowtie filter opening of an attenuation filter (fig. 2a, #26) to optimize acquisition of radiographic diagnostic data from a subject (fig. 2a, #3) while reducing dosage of electromagnetic energy (fig. 2a, #15) projected toward the subject.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the device of Toth as modified above with the filter of Moore, since one would be motivated to make such a modification to better compensate for variations in the path length of examining radiation through the body of a patient (col. 1, lines 5-9) as implied from Moore.

29. Claims 24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Horiuchi.

30. Regarding claim 24, Moore discloses system (fig. 1a) comprising a rotatable gantry having a bore centrally disposed therein (fig. 1a, #8), a table movable (fig. 1b, #4) within the bore and configured to position a subject (fig. 1b, #3) for tomographic data acquisition within the bore (abstract, line 1), a high frequency electromagnetic energy projection source (fig. 1a, #14) positioned within the rotatable gantry and configured to project high frequency electromagnetic energy (fig. 1a, #15) toward the subject (fig. 1a, #3), a detector array (fig. 1a, #17) disposed within the rotatable gantry (fig. 1a, #8) and configured to detect high frequency electromagnetic energy (fig. 1a, #15) projected by the projection source (fig. 1a, #14) and impinged by the subject (fig. 1a, #3), an attenuation filter (fig. 1a, #26) positioned between the high frequency electromagnetic energy projection source (fig. 1a, #14) and the subject (fig. 1a, #3), and adjusting at least one of an attenuation characteristic of the attenuation filter and a table position based on a specific position of the subject in the bore (fig. 2a).

However, Moore does not disclose a programmed computer.

Horiuchi teaches a programmed computer (paragraph 104).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the system of Moore with the computer of Hoiruchi, since broadly providing automatic means to replace manual activity, which has accomplished the same

result, involves only routine skill in the art. One having ordinary skill in the art would be motivated to make such a modification for faster processing and more user control.

31. Regarding claims 26 and 27, Moore further discloses adjusting the attenuation characteristic (fig. 2a), which would necessarily reduce noise due to the filtering, and wherein the attenuation filter is a bowtie filter having multiple filtering elements (fig. 2a, #26) dynamically positioned within an x-ray path (fig. 2a, #15)

32. Regarding claim 28, Moore further discloses performing an imaging scan (title).

33. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore and Horiuchi as applied to claim 24 above, and further in view of Mattson (US Patent 5228070).

Moore as modified above suggests a system as recited above.

However, Moore does not disclose determining a mean high frequency electromagnetic energy at a central portion of the subject with respect to a desired image noise, and dynamically adjusting a tube current to maintain the desired mean high frequency electromagnetic energy at at least one of the central portion of the subject and an edge portion of the subject.

Mattson teaches a mean high frequency electromagnetic energy at a central portion of the subject (subject in figure), which would necessarily be with respect to a desired image noise, and dynamically adjusting a tube current to maintain the desired mean high frequency electromagnetic energy at at least one of the central portion of the subject and an edge portion of the subject (col. 7, lines 53-61).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the system of Moore as modified above with the adjusting of Mattson, since one would be motivated to make such a modification to make images more uniform (col. 3, lines 5-10) as shown by Mattson.

34. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore and Horiuchi as applied to claim 28 above, and further in view of Edholm et al. (US Patent 3755672).

Moore as modified above suggests a system as recited above.

However, Moore does not disclose sensing a maximum edge x-ray flux, determining whether the maximum edge x-ray flux is within a selected range, and adjusting a configuration of an attenuation filter to maintain the maximum edge x-ray flux.

Edholm et al. teaches sensing (fig. 2, #14a and 14b) a maximum edge x-ray flux (fig. 2, #1), determining whether the maximum edge x-ray flux is within a selected range (col. 7, lines 3-8), and adjusting a configuration of an attenuation filter to maintain the maximum edge x-ray flux (col. 7, lines 8-14).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the system of Moore as modified above with the adjusting of Edholm et al., since one would be motivated to make such a modification to equalize average intensity in an image plane for better uniformity (col. 1, lines 3-10) as implied from Edholm et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gk

EDWARD GLICK
SUPERVISORY PATENT EXAMINER